

## Core Assessment #1 review:

(a) Shape: \* McDonalds and BK are both unimodal  
\* McDonalds is roughly symmetric, but BK is right skewed

Center: \* McDonalds has a median of 129.5, but BK has a median of 157.  
\* BK has a higher center

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Spread: \* McDonalds range is (92, 154) with an outlier at \$225, and IQR = \$22.5  
\* BK range is (106, 212) and IQR = \$38  
\* BK has wider range (more spread out)

(b) Outlier: 1.5 x IQR test

$$\text{IQR} = 138.5 - 116 = 22.5$$

$$Q3 + (1.5 \times \text{IQR}) = 138.5 + (1.5 \times 22.5) = 172.25$$

$$Q1 - (1.5 \times \text{IQR}) = 116 - (1.5 \times 22.5) = 82.25$$

Yes, \$225 is an outlier since it falls above \$172.25.

*OR*

$$\text{mean} \pm 2(\text{std.dev}) = (82.58, 179.42)$$

(c) Normal  $\Rightarrow N(131, 24.21)$

$$\begin{aligned} P(X > 140) &= \text{normalcdf}(140, E99, 131, 24.21) \\ &= 0.355 \\ &= 35.5\% \end{aligned}$$

